

## **DESCRIPTION OF THE STUDY AREA**

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This report describes the natural area inventory of New Hanover County, located along the southeastern coast of North Carolina between the Cape Fear River estuary and the Atlantic Ocean (Figure 1). According to the regional geomorphic classification of North Carolina (Harrington 1981), New Hanover County is located in the Barrier Island Region and Inner Coastal Plain of the Black River Section of the Coastal Plain Province. The county is bordered by Brunswick County along the west, by Pender County along the north and northeast, and by the Atlantic Ocean along the east (Figure 2). Northeast Cape Fear River defines the northern boundary of the county. As of 1999, approximately 41% of the county was classified as forested. According to the 2000 census, New Hanover County ranks 9<sup>th</sup> in total population among the state's 100 counties, yet is 99<sup>th</sup> in size (only Chowan is smaller). New Hanover averages more than 805 people per square mile, and only Mecklenburg (Charlotte) has a greater population density among North Carolina counties.

### **TOPOGRAPHY AND PHYSIOGRAPHY**

The land surface of New Hanover County generally can be characterized as an area of sandhills along the western side of the county, a broad terrace in the central portion, and a series of barrier islands along the eastern coastal edge. There is also a large area of riverine tidal wetlands in the northwestern and northern part of the county. The sandhills area occurs on two adjacent segments bisected by Northeast Cape Fear River. The northwestern portion is located between Cape Fear River and Northeast Cape Fear River along highway US 421. The southern portion is located along the western edge of the county from downtown Wilmington nearly to Kure Beach. It consists of dry rolling sandhills intermixed with low flats and wet depressions, and largely supports longleaf pine communities where not altered. The broad terrace is located in the northern and central portions of the county east of the sandhills area. Because of the flatness and limited drainage, portions of this area in the northern part of the county are permanently saturated by groundwater and form peatland swamps (pocosins). Other areas, especially southward, have sandy wet to dry soils, the majority of which has been altered. Prior to human settlement, these sandy areas largely supported longleaf pine communities, including some sandhill habitat. Barrier islands—Figure Eight, Wrightsville Beach, and Masonboro—form a nearly continuous dynamic landscape along the Atlantic shore from the Pender County line to Snows Cut. These islands are created and reshaped by oceanic tides, currents, and storms. They are characterized by a line of low dunes above the ocean beach, behind which are protected areas of marsh and sand flats. The area of riverine tidal wetlands is primarily located along Cape Fear River and Northeast Cape Fear River upstream from their confluence near downtown Wilmington. It consists mostly of freshwater tidal marsh and cypress–gum swamp.